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$$\text{At } v_{\max}, T = 2g \sin \alpha \quad \left[= \frac{14}{25}g \right]$$

$$\frac{14x}{0.5} = \frac{14g}{25} \text{ leading to } x = \frac{1}{5}.$$

$$\text{EPE at top: } \frac{14 \times 0.3^2}{2 \times 0.5} \quad [= 1.26]$$

$$\text{EPE at bottom: } \frac{14 \times ("theirx")^2}{2 \times 0.5} \quad [= 0.56]$$

$$2g \sin \alpha (0.8 + 0.5 + "theirx") + \frac{14 \times 0.3^2}{2 \times 0.5} = \frac{14 \times ("theirx")^2}{2 \times 0.5} + \frac{1}{2} \times 2 \times v^2$$

$$v^2 = 0.91g = 9.1 \text{ leading to } v = 3.02 \text{ m s}^{-1}.$$